

WHAT IS CLAIMED IS:

1. A nasal ventilation interface comprising:
  - a cannula connectable to a source of ventilation gas via at least two ventilation connectors;
  - 5 at least one reservoir flange coupled to the ventilation connectors and in close proximity with at least one nasal insert;
  - at least one seal portion positioned on a distal end of the at least one nasal insert;
  - a central reservoir between the at least one reservoir flange and the nasal
  - 10 insert;
  - at least one exhaust flange coupled to the central reservoir; and
  - an exhaust port coupled to the exhaust flange positioned at a midpoint between the at least two ventilation connectors.
2. The ventilation interface according to claim 1, wherein the exhaust port is
- 15 configured with an adjustable dial to adjust the aperture of the exhaust port.
3. The ventilation interface according to claim 1, wherein the exhaust port has a decreasing circumference from a proximal portion towards a distal end of the exhaust port.
4. The ventilation interface according to claim 3, wherein an interior wall of
- 20 the exhaust port maintains a substantially constant diameter.
5. The ventilation interface according to claim 1, further comprising at least one headgear flange.
6. The ventilation interface according to claim 5, wherein the at least one headgear flange is connected a flanged on the outer wall of the cannula.

7. The ventilation interface according to claim 6, wherein the headgear flange is substantially U-shaped.

8. The ventilation interface according to claim 1, wherein at least one of the reservoir flange, nasal insert, and central reservoir are configured to provide laminar  
5 flow.

9. The ventilation interface according to claim 1 wherein the exhaust port has a substantially circular cross section.

10. The ventilation interface according to claim 1 wherein the seal portion has a substantially oval cross section.

10 11. The ventilation interface according to claim 1 wherein the seal portion is configured to receive a skirt to prevent leakage.

12. The nasal ventilation interface according to claim 1 further comprising: means for adjusting an aperture of the exhaust port.

13. The nasal ventilation interface according to claim 1 further comprising:  
15 a cannula with means for providing improved laminar flow between at least one of a second inflow portion, a third inflow portion, a first outflow portion, a second outflow portion and a third outflow portion.

14. The nasal ventilation interface according to claim 1 further comprising:  
means for slowing the inflowing air velocity decreasing a drop in pressure by  
20 allowing additional air molecules to enter the central reservoir while driven by a same pressure setting.

15. A nasal ventilation interface comprising:

a cannula connectable to a source of ventilation gas via at least two ventilation connectors forming a first inflow portion;

a reservoir flange forming a second inflow portion;

5 at least one nasal insert, the at least one nasal insert forming a third inflow portion and a first outflow portion;

at least one seal portion positioned on a distal end of the at least one nasal insert;

a central reservoir forming a second outflow portion;

10 at least one exhaust flange forming a third outflow portion; and

an exhaust port positioned at a midpoint between the at least two ventilation connectors forming a fourth outflow portion and a fifth outflow portion.

16. The ventilation interface according to claim 15, wherein the exhaust port is configured with an adjustable dial to adjust the aperture of the exhaust port.

15 17. The ventilation interface according to claim 15, wherein the exhaust port has a decreasing circumference from a proximal portion towards a distal end of the exhaust port.

18. The ventilation interface according to claim 17, wherein an interior wall of the exhaust port maintains a substantially constant diameter.

20 19. The ventilation interface according to claim 15, further comprising at least one headgear flange.

20. The ventilation interface according to claim 19, wherein the at least one headgear flange is connected to the reservoir outer wall.

25 21. The ventilation interface according to claim 20, wherein the headgear flange is substantially U-shaped.

22. The ventilation interface according to claim 15, wherein at least one of the reservoir flange, nasal insert, and central reservoir are configured to provide laminar flow.

23. The ventilation interface according to claim 15 wherein the exhaust port  
5 has a substantially circular cross section.

24. The ventilation interface according to claim 15 wherein the seal portion has a substantially oval cross section.

25. The ventilation interface according to claim 15 wherein the seal portion is configured to receive a skirt to prevent leakage.

10 26. The nasal ventilation interface according to claim 15 further comprising: means for adjusting an aperture of the exhaust port.

27. The nasal ventilation interface according to claim 15 further comprising: a cannula with means for providing improved laminar flow between at least one of a second inflow portion, a third inflow portion, a first outflow portion, a second outflow  
15 portion and a third outflow portion.

28. The nasal ventilation interface according to claim 15 further comprising: means for slowing the inflowing air velocity without a drop in pressure by allowing additional air molecules to enter the central reservoir.

29. The nasal ventilation interface according to claim 15 wherein the at least  
20 one nasal insert are removable.

30. The nasal ventilation interface according to claim 15 wherein the at least one nasal insert and seal portion create a seal with at least one naris.

31. The nasal ventilation interface according to claim 15 wherein the at least one nasal insert and seal portion create a seal in at least one naris with a slight  
25 expansion of the seal portion by a positive airway pressure.

32. The nasal ventilation interface according to claim 15 wherein the at least one nasal insert and seal portion are held in at least one naris by a headgear.

33. A ventilation interface system, comprising:

a source of ventilation gas;

5 a connector having at least one branch that is coupled to the source of ventilation gas; and

a cannula that is connectable to the source of ventilation gas via another branch of the y-connector, wherein the cannula comprises a headgear flange that is engageable with a piece of headgear, at least two ventilation connectors forming a  
10 first inflow portion, a reservoir flange forming the first inflow portion into a second inflow portion, at least one nasal insert, the at least one nasal insert forming the second inflow portion into a third inflow portion and providing a path for a first outflow portion, a seal portion positioned on a distal end of the at least one nasal insert, a central reservoir forming the first outflowouflow portion into a second  
15 outflow portion, at least one exhaust flange forming the second outflow portion into a third outflow portion, and an exhaust port coupled to the central reservoir and positioned at a midpoint between the at least two ventilation connectors for forming the third outflow portion into the fourth outflow portion and forming the fourth outflow portion into a fifth outflow portion.

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